

10/505320

INTEGRATED READ-ONLY MEMORY
METHOD FOR OPERATING SAID READ-ONLY MEMORY
AND PRODUCTION METHOD

0109 Rec'd PCT/PTO 20 AUG 2004

5 PRIORITY AND CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is related to and claims the benefit of priority under 35 U.S.C. §§ 120, 365, and 371 to Patent Cooperation Treaty patent application no. PCT/EP03/01583, filed on February ¹⁷ 7, 2003, which was published at WO 03/075350, in German. ~~HH~~

10 [0002] This application is further related to and claims the benefit of priority of February 21, 2002 under 35 U.S.C. § 119 to German patent application no. DE 102 07 300.7, filed on February 21, 2002.

BACKGROUND OF THE INVENTION

1. Technical Field.

15 [0003] The invention relates to an integrated read-only memory, a method for operating said read-only memory and a method for producing an integrated read-only memory.

2. Related Art.

[0004] As the integration density in microelectronics increases, the demand
20 for large-scale integrated read-only memories is also increasing. These memories are used for example for on-chip storage of audio, graphics or video data.

[0005] Read-only memories are distinguished by the fact that the memory content is preserved even when the operating voltage is switched off. Such
25 read-only memories are, in particular, also of programmable design (PROM). Programmable components therefor are for instance fuses, diodes or, alternatively, special MOSFETs having an additional so-called floating gate. The latter is charged during programming and thereby shifts the threshold voltage of the MOSFET. Since the floating gate is insulated all around with
30 SiO₂, the charge retention can be guaranteed for approximately ten years.